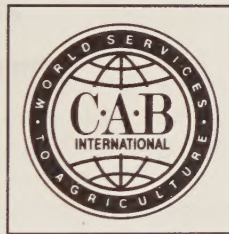


Review of Medical and Veterinary Entomology

Continues *Review of Applied Entomology* – Series B: Medical and Veterinary

Volume 80



Prepared by

**C·A·B INTERNATIONAL
DIVISION OF ANIMAL HEALTH AND MEDICAL PARASITOLOGY**

1992

ISSN 0957-6770

© C·A·B International, 1993

All rights reserved. No part of this publication may be reproduced in any form or by any means, electronically, mechanically, by photocopying, recording or otherwise, without the prior permission of the copyright owner.

published by

C·A·B International
Wallingford
Oxon OX10 8DE UK



The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from or is based upon sources believed by us to be reliable but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her own risk.

Printed by

C·A·B INTERNATIONAL
DIVISION OF ANIMAL HEALTH AND MEDICAL PARASITOLOGY

printed by

Unwin Brothers Ltd, The Gresham Press, Old Woking, Surrey, UK
A Member of the Martins Printing Group

C·A·B INTERNATIONAL INFORMATION SERVICES

Wallingford, Oxon OX10 8DE, UK

Telephone: Wallingford (0491) 32111

Review of Medical and Veterinary Entomology

A monthly journal compiled from the CAB ABSTRACTS database.

Produced by the DIVISION OF ANIMAL HEALTH AND MEDICAL PARASITOLOGY

Editor

J.A.H. Brooks BSc, MSc, DIC, FRES

STAFF

Head of Division

G.D. Phillips BSc, BVSc, PhD, MRCVS

Head of Department of Medical Parasitology

C.W. Gordon BA, MInfSc

Head of Department of Animal Health

M.R. Hails BSc, DipAgricEcon, MInfSc, MIBiol

Scientific Information Officers

Entomology

J.A.H. Brooks BSc, MSc, DIC, FRES

J.J. Gainsley HNC

A.W.R. McCrae MA, PhD, MIBiol, FRES

L. Phillips BSc, MSc

Parasitology

M. Cooney BSc

C. Docherty BSc

N.M. Hamilton BSc

P.M. Neenan BSc, HDipEd

S.E. Verrall BSc

Clerical Officer

V.J. Tilling

Mycology

S. Bamford BSc, PhD

J.L. Halsall MSc, MInfSc

Veterinary Sciences

H.B.A. Darbyshire BVSc, PhD, FRCVS

S. Glowka BVSc, DVM

M.G. Gotts MA

C.D. Johnson CChem, MRSC

Z. Pinter BVSc, DVM

C.D. Roots BSc

R. Taylor BSc, MIBiol

Clerical Assistant

S. Moore

Data Entry Staff

Manager D. Mitchell

H. Burdess

B. Dodd

J. Gillett

S. Harrison

S. Hawkins

P. Hawley

M. Mills

E. Smith

Review of
Medical and
Veterinary
Entomology

Content
Volume 80

TAXONOMY	1	63	113	171	231	303	357	413	485	555	617	689
ANATOMY AND MORPHOLOGY	1	63	113	171	232	303	357	413	485	555	617	689
REPRODUCTION AND DEVELOPMENT	1	63	113	171	232	303	357	413	485	555	617	689
PHYSIOLOGY AND BIOCHEMISTRY .	1	63	113	171	232	303	357	413	485	555	617	689
GENETICS AND MOLECULAR GENETICS	2	64	113	172	234	304	358	414	486	555	618	690
ECOLOGY AND BEHAVIOUR	3	64	113	172	235	304	358	414	486	555	619	690
GEOGRAPHICAL DISTRIBUTION, FAUNAS	3	65	114	173	235	305	359	415	487	556	619	690
TECHNIQUES AND APPARATUS	3	65	114	173	236	305	359	415	487	556	619	690
ARTHROPODS AND MAN: CULTURAL, PSYCHOLOGICAL, MEDICINAL AND FORENSIC ASPECTS	3	65	114	174	236	305	359	416	487	557	620	690
INSECTA	4	66	114	174	236	306	360	416	488	557	621	690
Blattaria	4	66	114	174	236	306	360	416	488	557	621	690
Phthiraptera	10	67	116	176	241	307	361	418	490	559	622	690
Mallophaga	10	67	116	176	-	307	361	418	490	559	622	690
Anoplura	11	67	116	176	-	307	361	418	-	559	623	690
Hemiptera	11	68	116	176	242	308	361	419	492	559	623	690
Reduviidae	11	68	116	176	-	308	362	419	-	559	623	690
Cimicidae	-	-	-	177	-	309	363	421	493	-	623	690
Other Hemiptera	12	69	116	177	-	309	363	422	493	561	623	690
Siphonaptera	12	69	117	177	-	309	364	422	493	561	624	690
Diptera	12	70	117	178	244	310	365	422	494	562	624	690
Culicidae	13	70	117	178	244	310	365	422	494	562	624	690
Ceratopogonidae	21	75	131	184	255	317	372	430	503	574	646	710
Phlebotominae	21	76	132	185	256	318	372	431	504	575	646	710
Simuliidae	21	77	133	186	258	320	373	433	505	576	647	710
Tabanomorpha	22	-	134	-	-	-	374	-	-	-	649	
Glossinidae	22	78	134	187	260	321	375	435	506	580	650	710
Muscidae, Fanniidae	23	78	135	189	264	322	375	435	506	581	652	710
Calliphoridae, Sarcophagidae	27	82	136	192	266	324	377	437	509	582	653	710
Oestridae, Cuterebridae, Gasterophilidae	32	84	-	193	269	325	380	439	511	583	654	710
Other Diptera	33	84	138	194	270	325	380	441	511	584	655	720
Coleoptera	34	86	140	194	272	327	381	442	513	586	656	720
Lepidoptera	34	87	-	196	273	329	382	443	514	586	-	720
Hymenoptera	35	87	140	196	273	329	382	444	514	587	657	720
Other Insecta	37	90	142	197	274	331	384	-	515	589	661	720

ARACHNIDA	37	90	142	198	274	331	385	446	515	589	662	735
Acarari	37	90	142	198	274	331	385	446	515	589	662	735
Acarioidea	37	90	142	198	275	331	385	446	515	589	662	735
Mesostigmata	44	92	152	205	279	334	389	454	519	593	665	742
Parastigmata	44	92	152	205	280	335	390	454	520	593	665	742
Opilobatida	45	—	—	—	281	335	391	455	520	594	—	743
Mesostigmata	45	93	153	206	281	336	391	455	520	594	665	743
Tetranychidae	47	96	155	207	283	339	393	458	523	595	667	752
Scorpiones	48	97	155	208	283	339	393	458	524	596	667	754
Other Arachnida	—	—	156	—	—	—	—	—	—	—	—	—
CRUSTACEA	49	97	156	208	284	339	394	460	525	596	668	756
Parasitic Crustacea	49	97	156	208	284	339	394	460	525	596	668	756
Other Crustacea	50	97	157	209	284	340	396	461	525	597	668	757
MYRIAPODA	—	97	158	209	—	—	396	—	—	—	—	—
ENTASTOMIDA	50	98	158	209	—	341	396	—	—	598	—	758
DISEASES AND DISORDERS OF VERTEBRATES	50	98	158	210	285	341	397	461	525	598	668	758
DISEASES AND PATHOGENS OF ARTHROPODS	54	103	163	216	291	347	403	474	536	605	676	758
CONTROL AND VECTOR MANAGEMENT	55	105	164	219	—	349	406	476	536	605	679	775
Control measures	55	105	164	219	—	349	406	476	536	606	679	775
Pesticide resistance	55	105	164	220	294	350	406	477	537	606	681	776
Control equipment	—	—	—	220	294	350	406	477	537	606	681	776
Quarantine and legislation	—	—	—	221	—	—	406	478	538	—	682	777
ECONOMIC ASSESSMENT	55	105	164	221	295	350	407	478	538	606	682	777
PHARMACEUTICALS	55	106	165	221	295	351	407	478	538	607	682	777
BOOKS, REPORTS, CONFERENCES	—	111	169	228	299	354	410	483	541	613	687	786
HISTORY AND BIOGRAPHY	62	112	170	230	302	356	—	484	542	615	688	788
AUTHOR INDEX	789											
SUBJECT INDEX	829											
of source journals	i											

REVIEW ARTICLE

VOLUME 80

Personal protection methods against vectors of disease By C.F. Curtis	543
--	-----

Review of Medical and Veterinary Entomology

ERRATA

Volume 80 (1982)

Abstract No.

- | | |
|------|--|
| 94 | for ' <i>C. fuscocephalus</i> ' read ' <i>C. fuscocephala</i> ' |
| 336 | for ' <i>Thermocyclops oblongatum</i> ' read ' <i>Thermocyclops oblongatus</i> ' |
| 520 | for ' <i>A. oswoldoi</i> ' read ' <i>A. oswaldoi</i> ' |
| 569 | for ' <i>Hermetia illuscens</i> ' read ' <i>Hermetia illucens</i> ' |
| 673 | for ' <i>Carpoglyphis</i> ' read ' <i>Carpoglyphus</i> ' |
| 1511 | for 'HEYNES, H.' read 'HEYNE, H.' |
| 1716 | for ' <i>Clarius</i> ' read ' <i>Clarias</i> ' |
| 1870 | for ' <i>Neopsylla bidentaliformis</i> ' read ' <i>Neopsylla bidentatiformis</i> ' |
| 1978 | for ' <i>P. dubosqci</i> ' read ' <i>P. dubosqi</i> ' |
| 2135 | for 'MacSWAIN, J.L.' read 'McSWAIN, J.L.' |
| 2158 | for ' <i>L. pallidium</i> ' read ' <i>L. pallidum</i> ' |
| 2441 | for ' <i>C. fuscocephalus</i> ' read ' <i>C. fuscocephala</i> ' |
| 2670 | after ' <i>Buthotus tamulus</i> ' insert ' <i>[Mesobuthus tamulus]</i> ' |
| 2779 | for 'KOBAYASHI, T.' read 'KOBAYASHI, T.' |
| 2905 | for ' <i>Anopheles grabhami</i> ' read ' <i>Anopheles grabhamii</i> ' |
| 3018 | for ' <i>S. epidermiditis</i> ' read ' <i>S. epidermidis</i> ' |
| 3193 | after ' <i>Leidynema</i> ' insert ' <i>(Basiria)</i> ' |
| 3579 | for ' <i>Cheyletiella parasitovorax</i> ' read ' <i>Cheyletiella parasitivorax</i> ' |
| 3899 | for 'McEWAN, P.' read 'McEWEN, P.' |
| 3966 | for ' <i>M. africanus</i> ' read ' <i>M. africana</i> ' |
| 4375 | for ' <i>Leidynema appendiculatum</i> ' read ' <i>L. appendiculata</i> ' |
| 5161 | for 'MARILIUS, J.C.' read 'MARILUIS, J.C.' |
| 5618 | for ' <i>A. turkhurdi</i> ' read ' <i>A. turkhudi</i> ' |
| 5626 | for ' <i>Caulerpa scapelliformis</i> ' read ' <i>Caulerpa scalpelliformis</i> ' |
| 6120 | for 'DATTWYLLER, R.J.' read 'DATTWYLER, R.J.' |